VOLUME 16, 1972
CONTENTS

Number 1 — issued September 1972

Sokolova, M. N., Trophic Structure of Deep-Sea Macrobenthos. 1

Mileikovsky, S. A., The "Pelagic Larvaton" and its Role in the Biology of the World Ocean, with Special Reference to Pelagic Larvae of Marine Bottom Invertebrates. 13

Qasim, S. Z., P. M. A. Bhattathiri and V. P. Devassy, The Effect of Intensity and Quality of Illumination on the Photosynthesis of some Tropical Marine Phytoplankton. 22

Bunt, J. S., C. C. Lee and E. Lee, Primary Productivity and Related Data from Tropical and Subtropical Marine Sediments. 28

Carpenter, E. J., B. B. Peck and S. J. Anderson, Cooling Water Chlorination and Productivity of Entrained Phytoplankton. 37

Grall, J.-R., Développement «printanier» de la Diatomée *Rhizosolenia delicatula* près de Roscoff. [Spring Bloom of the Diatom *Rhizosolenia delicatula* near Roscoff]. 41

Patriquin, D. and R. Knowles, Nitrogen Fixation in the Rhizosphere of Marine Angiosperms. 49

Wodinsky, J., Breeding Season of *Octopus vulgaris*. 59

Shewbart, K. L., W. L. Mies and P. D. Ludwig, Identification and Quantitative Analysis of the Amino Acids Present in Protein of the Brown Shrimp *Penaeus aztecus*. 64

Bashamohideen, M. and V. Parvatheswararao, Adaptations to Osmotic Stress in the Fresh-water Enryhaline Teleost *Tilapia mossambica*. IV. Changes in Blood Glucose, Liver Glycogen and Muscle Glycogen Levels. 68

Greze, I. I., Sur quelques Rythmes du Cycle Biologique des Espèces d'Amphipodes de la Mer Noire Présentant des Populations nombreuses. [On some Rhythms of the Biological Cycle of Amphipod Species of the Black Sea Represented by Mass Populations]. 75

Moritz, K. und V. Storch, Über den ultrastrukturellen Bau der Skaliden von *Trachydemus giganteus* (Kinorhyncha). [On the Ultrastructural Morphology of the Scalids of *Trachydemus giganteus* (Kinorhyncha)]. 81

Number 2 — issued September 1972

Schmidt, W., Results of the UNDP (SF)/FAO Regional Fisheries Survey in West Africa. Report No. 1. Deep-scattering *Sardinella aurita* off Mauritania. 91

Morris, R. J., The Occurrence of Wax Esters in Crustaceans from the North-east Atlantic Ocean. 102

Brown, B. E. and R. C. Newell, The Effect of Copper and Zinc on the Metabolism of the Mussel *Mytilus edulis*. 108

Roberts, D., The Assimilation and Chronic Effects of Sub-lethal Concentrations of Endosulfan on Condition and Spawning in the Common Mussel *Mytilus edulis*. 119

Kutty, M. N., Respiration Quotient and Ammonia Excretion in *Tilapia mossambica*. 126

Black, R. E., Nucleic Acid and Protein Levels in Strobilating Polyps of *Chrysaora quinquecirrha* and *Aurelia aurita*. 134

Dowidar, N. M., Morphological Variations in *Ceratium egyptiacum* in Different Natural Habitats. 138

Atapattu, D. H., The Distribution of Molluscs on Littoral Rocks in Ceylon, with Notes on their Ecology. 150

Woollacott, R. M. and R. L. Zimmer, Origin and Structure of the Brood Chamber in *Bugula neritina* (Bryozoa). 165

Lewin, J. and D. Mackas, Blooms of Surf-Zone Diatoms Along the Coast of the Olympic Peninsula, Washington. I. Physiological Investigations of *Chaetoceros armatum* and *Asterionella socialis* in Laboratory Cultures. 171

Number 3 — issued October 1972

Ankel, W. E., Gunnar Thorson in Memoriam. 183

Vandermeulen, J. H., N. D. Davis and L. Muscatine, The Effect of Inhibitors of Photosynthesis on Zooxanthellae in Corals and Other Marine Invertebrates. 185

Nedwell, D. B. and G. D. Floodgate, The Effect of Microbial Activity upon the Sedimentary Sulphur Cycle. 192

Betouhim-El, T. and D. Kahan, *Tisbe pori* n. sp. (Copepoda: Harpacticoida) from the Mediterranean Coast of Israel and its Cultivation in the Laboratory. 201

Navas, D., Medusa Buds on *Eirene elliceana* Gonads (Leptomedusae, Eirenidae). 210

Schneider, J., Niedere Pilze als Testorganismen für Schadstoffe in Meer- und Brackwasser. Die Wirkung von Schwermetallverbindungen und Phenol auf *Thraustochytrium striatum*. [Lower Fungi as Test Organisms of Pollutants in Sea and Brackish Water. The Effects of Heavy Metal Compounds and Phenol on *Thraustochytrium striatum*]. 214

Schulz-Baldes, M., Toxizität und Anreicherung von Blei bei der Miesmuschel *Mytilus edulis* im Laborexperiment. [Toxicity and Accumulation of Lead in the Common Mussel *Mytilus edulis* in Laboratory Experiment]. 226

Fenaux, R., A Historical Survey of the Appendicularians from the Area covered by the IIOE. 230

Kress, A., Veränderungen der Eikapselvolumina während der Entwicklung verschiedener Opisthobranchier-Arten (Mollusca. Gastropoda). [Changes in Egg-capsule Volumes During the Development of Different Opisthobranch Species (Mollusca, Gastropoda)]. 236

Rafail, S. Z., The Application of a Multiple-Recapture Technique for the Study of Relatively Small Fish Populations. 253

Number 4 — issued October 1972

Vinogradov, M. E., V. V. Menshutkin and E. A. Shushkina, On Mathematical Simulation of a Pelagic Ecosystem in Tropical Waters of the Ocean. 261

Gessner, R. V., R. D. Goos and J. McN. Sieburth, The Fungal Microcosm of the Internodes of *Spartina alterniflora*. 269

Brooks, R. D., R. D. Goos and J. McN. Sieburth, Fungal Infestation of the Surface and Interior Vessels of Freshly Collected Driftwood. 274

Wittenberger, C., The Glycogen Turnover Rate in Mackerel Muscles. 279

Bohling, H., Gelöste Aminosäuren in Oberflächenwasser der Nordsee bei Helgoland: Konzentrationsveränderungen im Sommer 1970. [Dissolved Amino Acids in Surface Water of the North Sea Near Helgoland: Concentration Changes During Summer 1970]. 281

Russel, P. J. C., Biological Studies on *Cardium glaucum*, Based on some Baltic and Mediterranean Populations. 290

Richard, J. D. and D. A. Hughes, Some Observations of Sea Turtle Nesting Activity in Costa Rica. 297

Fenaux, R., Variations Saisonnières des Appendiculaires de la Région Nord Adriatique. [Seasonal Variation of the Appendicularians from the North Adriatic Area]. 310

Coste, B., J. Gostan et H. J. Minas, Influence des Conditions Hivernales sur les Productions Phyto- et Zooplanktoniques en Méditerranée Nord-Occidentale. I. Structures Hydrologiques et Distribution des Sels Nutritifs [Influence of Winter Conditions on Phyto- and Zooplankton production in the Northwestern Part of the Mediterranean. I. Hydrological Structures and Nutrient Distribution]. 320

Hummon, W. D., Dispersion of Gastrotricha in a Marine Beach of the San Juan Archipelago, Washington. 349